

CLAIMS

1. Method for producing and strapping recumbent stacks of printed products, wherein the printed products are supplied at a supply point (Z) from above on to a conveying surface (2), and, standing on one edge, are conveyed as a continuously growing stack in a stacking direction (S) along the conveying surface (2) away from the supply point (Z), wherein discreet stacks (7) are isolated from the continuously growing stack, wherein endplates (4) are positioned at a downstream and an upstream end of each discreet stack, and wherein each isolated discreet stack is conveyed being held between a downstream and an upstream compression jaw (11 and 10) in stacking direction (S) into a strapping position (12), is compressed and, in the compressed condition, is strapped with a strapping material, characterized in that in order to convey the discreet stack (7) into the strapping position (12), the two compression jaws (10,11) are moved into the stack area from a first side of the conveying surface (2) in an essentially horizontal motion transverse to the stacking direction (S), and that for strapping a loop of strapping material is prepared on the a second side of the conveying surface (2) opposite its first side and is positioned around the stack (7) through an essentially horizontal relative motion transverse to the stacking direction, between the loop and the stack (7) held by the compression jaws (10,11).

2. Method according to claim 1, characterized in that, by tightening the loop, the stack (7) is strapped together with the compression jaws (10, 11) and that the strapped stack (7) is separated from the compression jaws (10, 11) by an essentially horizontal relative motion transverse to the stacking direction, between the compression jaws (10, 11) and the strapped stack (7).
3. Method according to claim 1 or 2, characterized in that the stack (7), held between the compression jaws (10, 11), remains stationary in the strapping position (12) and the loop is moved towards the stack (7).
4. Method according to claim 2 or 3, characterized in that, in order to separate the stack (7) from the compression jaws (10, 11), the compression jaws are retracted from the stack area (16).
5. Method according to one of claims 1 to 4, characterized in that, between successive strapping processes, a further essentially horizontal relative motion transverse to the stacking direction, is performed between the loop and the stack (7) held by the compression jaws (10, 11).
6. Method according to one of claims 1 to 5, characterized in that, in order to isolate the discreet stack (7) from the continuously growing stack (6), a first support element (14) is moved in stacking direction (S) from a starting position (14A) upstream of the supply point (Z) through the supply point (Z), a second support element (15) is inserted from below the conveying surface (2) into the first sup-

- port element (14) in a position downstream of the supply point (Z) and, in relation to the first support element (14), the second support element (15) is accelerated in stacking direction (S).
7. Method according to claim 6, characterized in that, in order to transfer the upstream end of an isolated stack (7) to the upstream compression jaw (10), the second support element (15) is moved in stacking direction (S) just downstream of a starting position (10A) of the upstream compression jaw (10), the upstream compression jaw (10) is moved into the stack area (16) and is then moved in stacking direction (S), and the second support element (15) is lowered below the conveying surface (2).
 8. Method according to claim 7, characterized in that the rear endplate is positioned between the upstream compression jaw (10) and the second support element (15) before the second support element (15) is lowered.
 9. Method according to claim 7 or 8, characterized in that, in order to transfer the downstream end of the continuously growing stack (6) to the downstream compression jaw (11), the second support element (15) waits downstream of the starting position (10A) of the upstream compression jaw (10), the upstream compression jaw (10) is moved into the stack area (16) and is then moved in stacking direction (S), and the second support element (15) is lowered below the conveying surface (2).

10. Method according to claim 9, characterized in that the front endplate (4) is positioned between the first support element (14) and the second support element (15) before the first support element (14) is lowered.
11. Method according to claim 8 or 10, characterized in that the endplates (4) are inserted into the stack area from above for being positioned at the stack ends.
12. Device for producing and strapping recumbent stacks of printed products, which device comprises a supply point (Z) where the printed products are supplied from above on to a conveying surface (2), wherein the conveying surface extends from the supply point (Z) in stacking direction (S) to a strapping position (12) and a stack area (16) is reserved above the conveying surface, and which device further comprises means for isolating discreet stacks (7) from a stack (6) which is continuously growing along the conveying surface (2), means for positioning endplates (4) at a downstream and an upstream end of the isolated stack (7), an upstream and a downstream compression jaw (10, 11) for holding the isolated stack and for conveying the held stack into the strapping position (12), and a strapping device (30) for strapping the isolated stack (7) in the strapping position, characterized in that the compression jaws (10, 11) are arranged to be moveable from a first side of the stack area (16) into and out of the stack area (16), that the strapping device (30) comprises a looping channel (31) with a closing means (31'), the strapping device being arranged in the area of the strap-

- ping position, at least when inactive, on a second side of the stack area (16) opposite the first side, and that the compression jaws (10, 11) and the looping channel (31) with the closing means (31') are moveable relative to each other, substantially horizontally and transverse to the stacking direction (S).
13. Device according to claim 12, characterized in that the compression jaws (10, 11) when positioned in the stack area (16) reach from the first side of the stack area (16) beyond the middle of the stack area (16).
 14. Device according to claim 12 or 13, characterized in that the conveying surface (2) comprises a conveyor belt (2.1) being equipped to be driven at a constant speed, away from the supply point (Z), as well as a second conveyor belt (2.2) being equipped to be driven at a variable speed and being arranged adjacent the first conveyor belt (2.1).
 15. Device according to one of claims 12 to 14, characterized in that a compression carriage (13) being equipped to move back and forth in parallel to the stacking direction (S), is provided, upon which compression carriage (13) the compression jaws (10, 11) are arranged being moveable independently of each other back and forth parallel to the stacking direction (S).
 16. Device according to one of claims 12 to 15, characterized in that the means for isolating a discreet stack (7) comprises a first support element (14) and a second

support element (15), that both support elements (14, 15) are designed to be moveable back and forth parallel to the stacking direction (S) and to be lowered and raised below and above the conveying surface (2) and to be positioned simultaneously in the same spot of the stack area (16).

17. Device according to one of claims 12 to 16, characterized in that the means for positioning the endplates (4) comprises an endplate storage unit (20) situated above the stack area (16), the head (21) of which is equipped for positioning endplates (4) in the stack area (16).
18. Device according to claim 17, characterized in that, in addition of being equipped for positioning endplates, the head (21) is further equipped for moving the endplates parallel to the stacking direction (S).